

PATENT**AMENDMENTS TO THE CLAIMS**

Following is a complete set of claims as amended with this Response. This complete set of claims excludes cancelled claim 1 and includes amended claims 2-4, 6, 7, 9-16, 18, and 19.

1. (Cancelled)
2. (Currently Amended) The method of claim ~~[[1]]~~ 4 wherein analyzing the patient cardiac electrical signals comprises analyzing features of events within the signals including one or more of event duration, event slope, time between events, and event variability.
3. (Currently Amended) The method of claim ~~[[1]]~~ 4 wherein controlling operation of the implantable cardiac stimulation device comprises outputting a warning signal if the efficacy of the antiarrhythmic drugs falls below a predetermined threshold.
4. (Currently Amended) ~~The method of claim 1~~ A method comprising:
administering an antiarrhythmic drug to a patient;
receiving patient cardiac electrical signals via an implantable cardiac stimulation device implanted in the patient;
analyzing the patient cardiac electrical signals to detect the effects, if any, on the cardiac electrical signals caused by the antiarrhythmic drug; and
automatically controlling operation of the implantable cardiac stimulation device based on results of the analysis of the patient cardiac electrical signals;
wherein analyzing the patient cardiac electrical signals comprises determining the most likely class of antiarrhythmic drugs, if any, taken by the patient.

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5. (Original) The method of claim 4 further comprising inputting a value identifying an antiarrhythmic drug prescribed to the patient and its class and wherein controlling operation of the implantable cardiac stimulation device includes the step of outputting a warning signal if the class of the prescribed drug does not match the class of antiarrhythmic drugs found to have been taken by the patient.

6. (Currently Amended) The method of claim ~~[[1]]~~ 4 wherein the implantable cardiac stimulation device includes a drug pump for delivering antiarrhythmic drugs to the patient and wherein controlling operation of the implantable cardiac stimulation device comprises adjusting a dosage of antiarrhythmic drugs delivered by the drug pump based on the results of the analysis of the patient cardiac electrical signals.

7. (Currently Amended) The method of claim ~~[[1]]~~ 4 wherein the implantable cardiac stimulation device is capable of performing cardiac pacing and wherein controlling operation of the implantable cardiac stimulation device comprises controlling cardiac pacing based on the results of the analysis of the patient cardiac electrical signals.

8. (Original) The method of claim 7 wherein the implantable cardiac stimulation device is capable of performing dynamic overdrive pacing and wherein controlling cardiac pacing comprises controlling an aggressiveness of the overdrive pacing based on the results of the analysis of the patient cardiac electrical signals.

9. (Currently Amended) The method of claim ~~[[1]]~~ 4 wherein the implantable cardiac stimulation device is capable of performing defibrillation functions and wherein controlling operation of the implantable cardiac stimulation device comprises controlling defibrillation functions based on the results of the analysis of the patient cardiac electrical signals.

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10. (Currently Amended) The method of claim 4 wherein the implantable cardiac stimulation device includes a sensor for sensing a physiological parameter affected by anti-arrhythmic drugs and further comprising:

inputting physiological signals from the sensor; and
analyzing the physiological signals to corroborate the results of the analysis of the patient cardiac electrical signals.

11. (Currently Amended) The method of claim 4 wherein analyzing the patient cardiac electrical signals comprises:

inputting values representative of expected changes to features of cardiac electrical signals caused by antiarrhythmic drugs; and
comparing features of patient cardiac electrical signals detected after administration of an antiarrhythmic drug with corresponding features of cardiac electrical signals detected before administration of the drug to verify that the expected changes occurred.

12. (Currently Amended) The method of claim 4 wherein analyzing the patient cardiac electrical signals comprises:

inputting templates representative of the expected quantitative features of cardiac electrical signals as affected by antiarrhythmic drugs; and
comparing portions of the patient cardiac electrical signals with the templates to detect the effects, if any, on the cardiac electrical signals caused by antiarrhythmic drugs.

13. (Currently Amended) The method of claim 4 wherein analyzing the patient cardiac electrical signals comprises:

inputting templates representative of expected qualitative changes to features of cardiac electrical signals caused by antiarrhythmic drugs; and

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comparing portions of the patient cardiac electrical signals with the templates to detect the effects, if any, on the cardiac electrical signals caused by antiarrhythmic drugs.

14. (Currently Amended) The method of claim [[1]] 4 wherein analyzing the patient cardiac electrical signals is performed using only patient cardiac electrical signals detected at substantially the same time of day.

15. (Currently Amended) The method of claim [[1]] 4 wherein analyzing the patient cardiac electrical signals cardiac is performed using only averaged patient cardiac electrical signals.

16. (Currently Amended) The method of claim [[1]] 4 wherein analyzing the patient cardiac electrical signals to detect the effects, if any, on the cardiac electrical signals caused by antiarrhythmic drugs includes the step of tracking RT intervals affected by antiarrhythmic drugs.

17. (Original) ~~The method of claim 16~~ A method comprising:
administering an antiarrhythmic drug to a patient;
receiving patient cardiac electrical signals via an implantable cardiac stimulation device implanted in the patient;
analyzing the patient cardiac electrical signals to detect the effects, if any, on the cardiac electrical signals caused by the antiarrhythmic drug; and
automatically controlling operation of the implantable cardiac stimulation device based on results of the analysis of the patient cardiac electrical signals;
wherein analyzing the patient cardiac electrical signals to detect the effects, if any, on the cardiac electrical signals caused by antiarrhythmic drugs includes the step of tracking RT intervals affected by antiarrhythmic drugs;

for use with patients receiving Class III antiarrhythmic drugs wherein controlling operation of the Implantable cardiac stimulation device comprises generating a

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notification signal when RT intervals have returned to a nominal state following patient receipt of the Class III antiarrhythmic drugs.

18. (Currently Amended) In an implantable cardiac stimulation device for implant within a patient, a system comprising:

means for administering antiarrhythmic drugs to the patient;

means for receiving patient cardiac electrical signals;

means for analyzing the patient cardiac electrical signals to detect the effects, if any, on the cardiac electrical signals caused by antiarrhythmic drugs; and

means for controlling operation of the implantable cardiac stimulation device based on the results of the analysis of the patient cardiac electrical signals;

wherein the means for analyzing the patient cardiac electrical signals comprises determining the most likely class of antiarrhythmic drugs, if any, taken by the patient.

19. (Currently Amended) A method comprising:

prescribing at least one specific antiarrhythmic drug to a patient;

receiving patient cardiac electrical signals via an implantable cardiac stimulation device implanted in the patient;

analyzing the patient cardiac electrical signals to monitor for a particular result expected to result from the at least one specific antiarrhythmic drug; and

generating a warning signal if the particular result is not detected;

wherein analyzing the patient cardiac electrical signals comprises determining the most likely class of antiarrhythmic drugs, if any, taken by the patient.